

14 determine the contribution  $S_p$  of the prompt neutrons produced by the thermal fissions  
15 and the contribution  $S_r$  of the delayed neutrons produced by the thermal, epithermal  
16 and fast fissions and to determine the quantity of each of the M+N isotopes from  $S_p$   
17 and  $S_r$  and from at least M+N-2 additional items of information related to the  
18 quantities of the M+N isotopes, expressing  $S_p$  and  $S_r$  as linear combinations of these  
19 quantities, the coefficients of these linear combinations being determined beforehand  
20 by calibration.

1 6. (Twice amended) Device according to claim 5, in which the thermalization means  
2 comprises a containment (10) that includes a central area (12) in which the object (2) will be  
3 placed and in which at least three sides are delimited by a thickness (14, 60) of moderator  
4 material, the neutron source (8) being placed in a fourth side of this containment and the  
5 neutron counting means (4, 52) being placed on the three sides between the central area and  
6 the thickness of moderator material, a thickness of neutron multiplier material (22, 24, 50)  
7 being provided between the central area and the neutron source and between the central area  
8 and neutron counting means, the neutron multiplier material being Pb.

1 9. (Twice amended) Device according to claim 6, also comprising a wall (36) made  
2 of neutron poison and moderator materials that delimits the fourth side of the containment, a  
3 corresponding thickness (223) of the multiplier material being between this wall (36) and the  
4 central area (12).

#### REMARKS

Applicant's undersigned counsel thanks the Examiner for the careful examination given the application. In this amendment claims 4, 6, and 9 have been amended to in light of the Examiner's formal objections. The specification has also been amended to correct typographical errors..

In the Office action the Examiner has objected to the specification under 35 U.S.C.